## THE DEVELOPMENT OF THE KNOWLEDGE-BASED ECONOMY IN THE REGIONS OF THE VISEGRAD COUNTRIES

## **Summary**

Reflections on the knowledge-based economy as a type of structure functioning in a market economy system began from the end of the 20th century. Very quickly, she was promoted to the rank of one of the most important problems affecting the economic and social changes taking place in the modern world. It is an economy in which an unlimited resource of knowledge is a fundamental productive factor and a driving force of economic and social development. The changing economic landscape in every corner of the world makes it necessary to analyze the processes of creating a knowledge-based economy at various levels, ranging from individual economic entities to international groups and global trends. The subject of the research presented in the doctoral dissertation is the interdependence between the knowledge-based economy and regional development. Referring to the subject of the study, the determination of the importance of the knowledge-based economy in the regional development of the Visegrad Group countries was adopted as the main research objective. The multifaceted nature of the main objective implies the clarification of a number of specific objectives divided into:

- cognitive goals:
- A. analysis and systematization of scientific terminology in the field of knowledge-based economy
  - B. analysis of conceptual structure and phenomena in relation to regional development
- C. identification and analysis of macroeconometric models of regional development based on knowledge and innovations
- D. defining similarities and differences in the development of the knowledge-based economy in the Visegrad Group countries
  - methodological purpose:

- E. developing a model to study the interdependence between the knowledge-based economy and regional development
  - pragmatic goal:
- F. determination of conditions and factors affecting the process of dynamizing the growth of the regional knowledge-based economy.

The following research hypotheses result from the research objectives:

- I. There is economic convergence between the regions of the Visegrad Group countries.
- II. The transformation of the economy towards a knowledge-based economy has increased the technological advancement of production processes in V4 regions.
- III. The regions of the Visegrad Group countries show similarities in the development of the knowledge-based economy.
- IV. Central regions are characterized by the highest level of advancement of the regional knowledge-based economy within each of the Visegrad Group countries.

The scope of the study, due to the complexity of the research topics undertaken, as well as for comparative purposes, was narrowed territorially to the countries of the Visegrad Group.

The dissertation consists of three parts, namely theoretical, methodological and empirical. The first two chapters are of theoretical nature. Chapter I is devoted to the theoretical aspects of the knowledge-based economy. The process of evolution of the importance of the knowledge resource in the light of various economic schools was presented, as well as an analysis of the emergence and evolution of a new type of economy - the knowledge-based economy. Chapter II defines the concept of region and regional development. The theoretical dimension of technical progress was presented in a regional perspective, and the importance of the regional economy in increasing innovation and the potential of knowledge resources was discussed, and factors conducive to these phenomena were discussed. Chapter III is the methodological part of the work, which presents the assumptions for the construction of macroeconometric models of the knowledge-based economy, and then, using the Generalized Method of Moments, a model of the regional knowledge-based economy was developed. The next two chapters constitute the empirical part of the dissertation. Chapter IV is a diagnostic chapter in which the state of the economy and societies of individual countries and regions of the Visegrad Group was assessed. Chapter V presents the results of the work and considers

the conditions and factors that have the greatest impact on the knowledge-based economy in the regions of the Visegrad Group. The work ends with a part devoted to discussing the results obtained, summarizing the implementation of the main research goal and verifying the research hypotheses set out at the beginning of the work.

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